GOVERNMENT OF INDIA
NEW AND RENEWABLE ENERGY
LOK SABHA

STARRED QUESTION NO:272
ANSWERED ON:31.08.2007
SETTING UP OF NON-CONVENTIONAL ENERGY POWER PROJECTS
Ananth Kumar Shri ;Owaisi Shri Asaduddin

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether India is lagging behind other countries in the generation of power from renewable energy sources;

(b) if so, the comparative position of the various countries in the world in this matter;

(c) whether the Government has received a number of proposals in the recent past for setting up of renewable energy projects in the country;

(d) if so, the details thereof, State-wise; and

(e) the action taken by the Government thereon?

Answer

MINISTER OF THE STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI VILAS MUTTEMWAR)

(a), (b),(c),(d)&(e) : A Statement is laid on the Table of the House.

Statement

Statement referred to in reply to parts (a), (b),(c),(d)&(e) of the Lok Sabha Starred Question No. 272 for 31.08.2007 regarding Setting up of Non-Conventional Energy Power Projects

(a): No, Sir.

(b): 10,467 MW grid-interactive renewable power generation capacity has been set up in the country as on 30.06.2007, comprising 7231MW from wind power, 2013MW from small hydro power, 1221 MW from bio-power and 2 MW from solar power, making the country one of the leading players in the sector, especially in relation to exploitation of estimated potential, details of which are given in Annexure.

In the case of wind power and small hydropower deployment, the country is placed respectively at fourth and tenth positions globally. In bagasse-cogeneration deployment the country is the leader. However, grid-interactive solar power, whose unit cost of generation is estimated at around Rs.20/kWh, is yet to attain economic viability in the existing conditions.

(c),(d) &(e) : Proposals from state governments as well from private sector for the grant of central financial assistance under the schemes / programmes of the Ministry are received on a regular basis. At times, these proposals are found to be incomplete or not in line with the provisions of the schemes / programmes. Complete proposals are considered and approved subject to budget provisions.

Annexure

Annexure referred to in reply to Part (b) of the Lok Sabha Starred Question No.272 for 31.8.2007

Details of estimated potential and deployment of Grid Interactive Renewable Power in the country as on 30.06.2007

S.No.	Renewable Source	Estimated Potential (as on 30.6.07) (in MW)	Achievements
1.	Wind Power	45,1951	7,230.99
2.	Small Hydro Power (upto 25 MW)	15,0002	2013.17

3. Bio Power
 # Agro residues & Plantations 16,8813 542.80
 # Cogeneration bagassee 5,0004 634.83
 # Urban & Industrial Waste 2,7005 43.45
 to energy 1221.08

1221.08

4. Solar power - 2.12

Total(in MW) 84,7766 10467.36

MW= Megawatt

Note:-

(1): Potential based on areas having wind power density (wpd) greater than 200 W/m2 assuming land availability in potential areas @ 1 per cent and requirement of wind farms @ 12 ha/MW, not all of which may be technically feasible and economically viable for grid-interactive wind power. In line with international practice for setting up grid- interactive wind power systems on sites with wpd greater than 300 W/m2,potential is estimated at 5000MW. Even if sites with wpd greater than 250 W/m2 were to be considered, potential is estimated at 15000 MW. Further, preliminary surveys do not at this juncture suggest a sizeable grid interactive offshore wind power potential. In comparison, wind power potential of USA considering sites having wpd greater than 300 W/m2 is estimated at 2.0- 7.6 million MW assuming PLF @ 25 per cent, depending on severity of land use restrictions. Deployment in the USA is placed at 12,736 MW corresponding to potential exploitation level of 0.17 - 0.64 per cent. in Europe, potential exploittation level for sites having wpd greater than 300 W/m2 is estimated at around 1-3 per cent, depending on serverity of land userestrictions. As against these, potential exploitation level of 16 per cent has been attained in the country, notwithstanding the lower wpd of 200 W/m2, thereby placing it in 4th position globally.

(2): Technically feasible and economically viable hydro potential is generally accepted at 40% of the total estimated potential. Accordingly, the technically feasible and economically viable small hydropower potential could be around 6000MW of which over 2000 MW has already been harnessed, placing the country in 10th position globally.

(3): Although the potential is based on surplus agro-residues, in practice there are several barriers in collection and transportation of such agro-residues to the generation site and biomass power generation units prefer to use fuel-wood for techno- economic reasons. A potential of 45,000 MWe from around 20mha of wastelands assumed to be yielding 10MT/ha/annum of woody biomass having 4000 k-cal/kg with system efficiency of 30% and 75% PLF has not been taken into account.

In order to realize this potential a major inter-Ministerial initiative involving, among others, Environment & Forests, Agriculture, Rural Development, and Panchayati Raj would be required. Further, a Biomass Atlas is under preparation which is expected to more accurately assess state-wise renewable energy potential from agro-residues.

(4): With the establishment of new sugar mills and modernization of existing ones, technically feasible potential is assessed at 5000 MWe, not all of which may be economically viable. Furthermore, several sugar companies/cooperatives are unable to develop bankable projects on account of their financial and liquidity positions. Even then, the country is leading in bagasse cogeneration deployment.

(5):With expansion of urban population post census 2001, current technically feasible municipal waste-to-energy potential is assessed at 1700 MWe, not all of which may be economically viable. However, subsidy disbursement under the municipal waste to energy programme had been kept in abeyance on the orders of the Supreme Court in the case of a PIL, in May 2005. This stay has now been vacated for setting up 5 pilot projects.

(6): Not all of this renewable energy potential may be suitable for grid-interactive power for technical and / or economic reasons. Further, estimate excludes potential for solar power which is dependent on future developments that might make solar technology cost-competitive for grid-interactive power generation applications.